

REMARKS

Claims 1-10 are pending in this application. By this Amendment, each of claims 1 – 10 has been amended. No new matter has been added. It is respectfully submitted that this Amendment is fully responsive to the Office Action dated June 22, 2004.

Specification:

The Abstract stands objected to in item 1 of the Action since it includes two paragraphs. However, the Abstract has been easily amended to overcome this objection by reciting the Abstract in a single paragraph. Accordingly, withdrawal of this objection is respectfully requested.

35 U.S.C. §101 Rejection:

Claims 1 – 10 are rejected under 35 U.S.C. §101 because claims 1 – 10 are drawn to a method or an apparatus for determining a regular N-polygon figure having vertexes of N in number. More specifically, the Examiner asserts that claims 1 – 10 are drawn to mathematical algorithms and therefore fail to produce a useful, concrete and tangible result.

This rejection is respectfully traversed.

It is respectfully submitted that each of claims 1 – 10 has been amended to include a boring feature, which is based on the mathematical algorithm such that the claims, as amended, now produce a useful, concrete and tangible result, and therefore include statutory subject matter as required under 35 U.S.C. §101. Accordingly, withdrawal of this rejection is respectfully requested.

As To The Merits:

As to the merits of this case, the Examiner sets forth the following rejection:

claims 1 – 10 are rejected under 35 U.S.C. §102(b) as being anticipated by David P. Little (SpiroGraph, <http://www.math.dartmouth.edu/~dlittle/java/SpiroGraph/>, 1997).

This rejection is respectfully traversed.

Independent Claims 1, 4, 5, 6, 9 and 10:

Independent claim 1, as amended, now calls for *boring a hole having a shape defined by the contour of the regular N-polygonal figure*. Independent claims 4, 5, 9 and 10, as amended, now call for *boring a hole having a shape defined by the figure*. Independent claim 6, as amended, now calls for *boring a hole having a shape defined by the regular N-polygonal figure*.

It is respectfully submitted that Little fails to disclose theses newly added features of the independent claims 1, 4, 5, 6, 9 and 10, since Little is completely silent with regard to boring a hole having a shape defined by the determined figure.

Accordingly, withdrawal of this rejection is respectfully requested.

Independent Claims 2, 3, 7 and 8:

With regard to these claims 2, 3, 7 and 8, the applied reference of Little does not disclose any of the recited features. Moreover, it is submitted that the Examiner failed to properly address the features of these claims, since these claims 2, 3, 7 and 8 were rejected in the same manner as that of independent claims 1, 4 – 6 and 9 – 10 discussed above, although claims 2, 3, 7 and 8 are to be drawn to a different embodiment of the present invention.

More specifically, Little clearly fails to disclose a regular (N-1)-polygonal figure that revolves along a circle, which circle is concentric to the center of a regular N-polygonal figure to be determined and has a radius r , and rotates at an angular velocity ω ; a contour of the said regular (N-1) -polygonal figure is inscribed on a circle having a radius $(N-1)^2r$; the regular (N-1)-polygonal figure revolves at an angular velocity $(1-N)\omega$; and an area being swept by the said regular (N-1)-polygonal figure defines a regular N-polygonal figure to be determined, which figure is circumscribed on a circle having a radius $N(N-2)r$.

For example, as shown in Fig. 1 of the present application, the equilateral triangular figure T (a figure having a regular (N-1) -polygonal shape) revolves along a circle, which circle is concentric to the center of a regular N-polygonal figure to be determined and has a radius r .

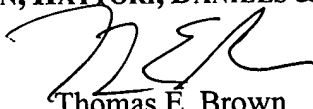
In view of the aforementioned amendments and accompanying remarks, Applicant submits that that claims, as herein amended, are allowable and the application is in condition for allowance. Applicant requests such allowance at an early date.

If the Examiner believes that this application is not now in condition for allowance, the Examiner is requested to contact Applicant's undersigned attorney to arrange for an interview to expedite the disposition of this case.

If this paper is not timely filed, Applicant respectfully petitions for an appropriate extension of time. The fees for such an extension or any other fees that may be due with respect to this paper may be charged to Deposit Account No. 50-2866.

Respectfully submitted,

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